REMARKS

Entry of this Amendment under 37 C.F.R. 1.116 is respectfully requested because it cancels claims and raised no new issues. No new matter is believed to be entered into the application by this amendment.

The Sequence of the Claims

Claims 1-5, 7-13 and 15-17 are pending in the application upon entry of this amendment. Claims 6 and 14 are cancelled by this amendment. Claims 1 and 10 have been amended to incorporate the subject matter of cancelled claims 6 and 14, respectively. The amending of claims 6 of 14, as a result, raises no new issues.

Claim Objections

The Examiner objects to claims 6 and 14 (now incorporated into claims 1 and 10) as containing informalities. The Examiner with his clarification of the concept of "main mode".

The present invention pertains to transflective liquid crystal displays that utilize both transmissive and reflective modes. The main mode is the mode (either transmissive or reflective) that is predominately used in a given device. For example, the specification at page 8, lines 1-2 discusses various applications that "uses the reflective mode as a main mode." Alternatively, the

specification at page 8, lines 6-7 discusses "the transmissive mode as the main mode."

Thus, the "main mode" in claims 6 and 14 is clear when read in light of the specification.

Rejection Under 35 U.S.C. 103(a) Over Kubo and Taiji

Claims 1-17 remain rejected under 35 U.S.C. 103(a) as being obvious over Kubo (USP 6,295,109) in view of Taiji (JP 3228027). Applicant traverses.

Distinctions of the invention over Kubo and Taiji have been placed before the Examiner. Neither Kubo nor Taiji disclose or suggest a transflective liquid crystal display wherein "each pixel region is divided into reflective and transmissive portions, and a reflection brightness of the transflective liquid crystal display device is improved due to a first reflected light at the reflector of the reflective portion and a second reflected light at a transflective portion of the transmissive portion." See claims 1 and 10. Neither Kubo nor Taiji additionally disclose or suggest, "a concentration of the reflective material scattered on a surface of the transflective film is adjusted according to a main mode of the transflective liquid crystal display device." See claims 1 and 10 as amended.

Despite the failures of the applied art, the Examiner asserts at page 6, lines 9 and 10 of the Office Action "Taiji disclose

(Fig. 3) sees a concentration of the reflective material scattered on surface of the transflective film that is adjustable". However, Fig. 3 of Taiji merely shows the interaction of transmissive and reflective properties as the concentration of aluminum particles and acrylic resin is changed. Fig. 3 of Taiji, that is, fails to disclose or suggest adjusting the concentration of particles in relationship to whether the main mode is either transmissive or reflective.

At page 6, lines 11-17 of the Office Action the Examiner tries to combine teachings from Kubo and Taiji to allege this art suggests "a reflection brightness of the transflective liquid crystal display device is improved due to a first reflected light at the reflector of the reflective portion and a second reflected light at the transflective film of the transmissive portion." However, Kubo discusses that the reflective electrode has a wave-like surface and scatters incident light to an appropriate range of directions (see Kubo at col. 48, lines 12-24). That is, the reflector having a wave-like surface does not improve reflection brightness but improves display quality according to viewing angle. Especially, Kubo prevents mirror reflection by the reflector having a wave-like surface.

Further, the Examiner is merely picking and choosing various teachings from Kubo and Taiji and combining them by impermissible hindsight reconstruction. Yet, further, at page 6, line 17 of the

Office Action the Examiner refers to "region T" which the Abstract and Figures of Taiji do not disclose.

It has been shown, the combination of Kubo and Taiji is insufficient to allege *prima facie* obviousness for at least three independent and distinct reasons: i) neither Kubo nor Taiji disclose or suggest the adjustability depending upon the main mode, ii) Kubo prevents mirror reflection, and iii) the utilization of impermissible hindsight reconstruction to combine teachings from the two references. Thus, the combination of Kubo and Taiji would fail to motivate the person having ordinary skill in the art to produce the invention as embodied in claims 1 and 10. Claims dependent upon claims 1 and 10 are patentable for at least the above reasons alone. This rejection is accordingly overcome and withdrawal thereof is respectfully requested.

CONCLUSION

The Examiner is respectfully requested to enter this Reply After Final in that it raises no new issues. Alternatively, the Examiner is respectfully requested to enter this Reply After Final in that it places the application in better form for Appeal.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert E. Goozner (Reg. No. 42,593) at the telephone number of the undersigned below, to conduct an interview

in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____
Joseph A. Kolasch, #22,463

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

JAK/REG:jmb/jls
3430-0126P

Attachment: Version with Markings to Show Changes Made

(Rev. 04/30/03)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 6 and 14 have been canceled.

The claims have been amended as follows:

1. (Twice Amended) A transflective liquid crystal display device, comprising:

a liquid crystal display panel having a first transparent substrate, a second transparent substrate, and a liquid crystal layer interposed between the first and second transparent substrates, the first transparent substrate having a color filter, the second transparent substrate having a plurality of pixel regions, a pixel electrode and a reflector, the reflector having a light transmitting hole which the pixel electrode covers, the light transmitting hole transmitting light;

a transflective film located outside of the second transparent substrate of the liquid crystal display panel around a location corresponding to the light transmitting hole, made of a transmissive material with reflective material scattered therein, the reflective material reflecting light, the transmissive material transmitting light; and

a back light device for supplying light toward the transflective film;

wherein each pixel region is divided into reflective and transmissive portions, and a reflection brightness of the transflective liquid crystal display device is improved due to a first reflected light at the reflector of the reflective portion and a second reflected light at the transflective film of the transmissive portion[.], and a concentration of the reflective material scattered on a surface of the transflective film is adjusted according to a main mode of the transflective liquid crystal display device.

10. (Twice Amended) A transflective liquid crystal display device, comprising:

a liquid crystal display panel having a first transparent substrate, a second transparent substrate, and a liquid crystal layer interposed between the first and second transparent substrates, the first transparent substrate having a color filter, the second transparent substrate having a plurality of pixel regions, a pixel electrode and a reflector, the reflector having a light transmitting hole which the pixel electrode covers, the light transmitting hole transmitting light;

a transflective film located outside of the second transparent substrate of the liquid crystal display panel around a location corresponding to the light transmitting hole, made of an acrylic-resin based transmissive material with reflective material

scattered therein, the reflective material reflecting light, the transmissive material transmitting light; and

a back light device for supplying light toward the transflective film;

wherein each pixel region is divided into reflective and transmissive portions, and a reflection brightness of the transflective liquid crystal display device is improved due to a first reflected light at the reflector of the reflective portion and a second reflected light at the transflective film of the transmissive portion[.], and a concentration of the reflective material scattered on a surface of the transflective film is adjusted according to a main mode of the transflective liquid crystal display device.